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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,905	12/14/2000	John Boreczky	FXPL-01009US0MCF/TAW	2658

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EXAMINER

SHANNON, MICHAEL R

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/738,905

Applicant(s)

BORECZKY ET AL.

Examiner

Michael R Shannon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10 January 2005 have been fully considered but they are not persuasive.

Regarding independent method and device claims 1 and 10, the Applicant argues that, "Yeo fails to disclose or suggest the step of generating an index from the second connection. The second connection, namely the cited data path 322 includes *previously generated* index values that are used for navigation." [Emphasis added by Applicant]. Also, the Applicant argues that the "system of Yeo does not create the second connection as cited by the Examiner (namely data path 322) as this connection includes already-created indexes."

In response, the Examiner respectfully disagrees with the applicant because the Yeo reference clearly teaches the claimed method and device for "opening a main connection for receiving transmission of a data flow; opening a second connection for transmission of at least one look-x data stream comprising data from said data flow; indexing at least one point of the look-x data stream to at least one corresponding point in said data flow; and providing control of a playback position of said data flow based on the indexed points in the look-x data stream," as met by data path 324 (Figure 3), as described in column 3, lines 48-50; data path 322 (Figure 3), as described in column 3, lines 48-50; the relation between the temporal snapshots and the continuous video frames, more specifically the client control sub-system 308, which **generates the index (at the client side)** into the video by contacting the server and getting that portion of

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video for display at the client, as described in column 4, lines 4-9; and by column 4, lines 52-58, respectively. The ability for the Yeo system to use the client control sub-system 308 for the purposes of generating an index (via signal path 326) into the video stream using the aforementioned correspondence between the continuous video frames and the temporal snapshots meets the claim and therefore the Applicant's arguments.

Also, the argument that the "system of Yeo does not create the second connection as cited by the Examiner (namely data path 322) as this connection includes already-created indexes" is not substantiated in the claim because claims 1 and 10 do not claim the ability to "create" the second connection, they simply claim the ability to "open" the second connection. However, the creation of the second connection could be met by server database 302, which creates the two data paths 322 and 324, cited previously.

Regarding dependant claims 2-9 and 11-14, the previous rejections still stand in view of the above and as discussed in the previous Office Action dated September 22, 2004, included below, with more detail added for clarification and response purposes.

Regarding new independent claim 15, the claim is rejected based on the same grounds discussed above (see rejection below).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1, 3, 5, 10, 11, 13, **and 15** are rejected under 35 U.S.C. 102(e) as being anticipated by Yeo (US Pat No. 6,711,741), cited by examiner.

With regards to claim 1, the claimed method for providing video data is met as follows: The claimed step of opening a main connection for receiving transmissions of a data flow, is met by data path 324 (Figure 3), as described in column 3, lines 48-50, wherein Yeo teaches a server sending source video frames through data path 324 and temporal snapshots through data path 322 to the client 102. The claimed step of opening a second connection for transmission of at least one look-x data stream comprising data from said data flow is met by data path 322 (Figure 3), as described in column 3, lines 48-50, discussed above. The claimed step of indexing at least one point of the look-x data stream to at least one corresponding point in the data flow is met by the relation between the temporal snapshots and the continuous video frames. Column 4, lines 52-58 teach a relation between the snapshots and the continuous video, Yeo states that the display requests the snapshot's corresponding segment of source video frames 106 from the server 100. This correspondence meets the claimed indexing step. **More specifically, the display request is forwarded to the client control sub-system 308 for generation of the index into the video stream (via signal path 326) [col. 4, lines 4-9].** The claimed step of providing control of a playback position of the data flow based on the indexed points in the look-x data stream is met by column 4,

lines 52-58, wherein Yeo teaches the ability for a user to control the playback and select the source frames to view based on the temporal snapshots.

With regards to claim 3, the claimed step of displaying at least one of a skip forward and a skip backward button configured to step a play position of the data flow to a position corresponding to a respective one of a next and a previous look-x data points relative to the current play position of the data flow is met by column 5, lines 1-3, wherein Yeo teaches the use of options within the media player 612 to step to the previous frame or the next frame, so as to allow the user to step through the playback sequence.

With regards to claim 5, the claimed data flow being a video and look-x points being frames of the data flow and being retrieved from the main connection or the second connection is met by column 3, lines 48-50, wherein Yeo discloses source video frames 106 (the video) being sent on the main data path 324, and temporal snapshots (the look-x points/frames) being sent on a second data path 322.

With regards to claim 10, the claimed device for client side video indexing is met as follows: The claimed video player is met by media player 612 (Figure 6a). The claimed main data stream for receiving transmissions of a data flow is met by stream 324 and the connection to network 104 (Figure 3 and as described in column 3, lines 48-50). The claimed look-x data stream connection for receiving transmissions of the data flow is met by stream 322 and the connection to network 104 (Figure 3, and as described in column 3, lines 48-50). The claimed controller for indexing at least one point of the look-x data stream to a corresponding at least one point in the data flow is

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met by the relation between the temporal snapshots and the continuous video frames.

Column 4, lines 52-58 teach a relation between the snapshots and the continuous video, Yeo states that the display requests the snapshot's corresponding segment of source video frames 106 from the server 100. This correspondence meets the claimed controller for indexing. **More specifically, the display request is forwarded to the client control sub-system 308 for generation of the index into the video stream (via signal path 326) [col. 4, lines 4-9].** The claimed display for displaying at least one of the indexed look-x points is met by video display 216 (Figure 2) and application window 600, which displays temporal snapshots 602-610 (look-x points) and media player 612 (Figure 6a).

With regards to claim 11, the claimed skip forward and skip backwards buttons that each step a play position of the data stream to a respective one of a next and a previous look-x points relative to the current play position of the data stream are met by column 5, lines 1-3, wherein Yeo teaches the use of options within the media player 612 to step to the previous frame or the next frame, so as to allow the user to step through the playback sequence.

With regards to claim 13, the claimed select button for providing a user the capability to select at least one of the indexed points enabling display of the data flow to begin and the selected indexed point is met by column 4, lines 52-58, wherein Yeo teaches the ability for a user to control the playback and select the source frames to view based on the temporal snapshots.

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With regards to claim 15, the claimed method for providing video data is met as follows: The claimed step of opening a main connection for receiving transmissions of a data flow containing video data without an existing index is met by data path 324 (Figure 3), as described in column 3, lines 48-50. The claimed step of opening a second connection for transmission of at least one look-x data stream comprising data from said data flow is met by data path 322 (Figure 3), as described in column 3, lines 48-50. The claimed step of in response to opening the first connection, generating a new index, the new index relating at least one point of the look-x data stream to at least one corresponding point in said data flow is met by the relation between the temporal snapshots and the continuous video frames, more specifically the client control sub-system 308, which generates the index (at the client side) into the video by contacting the server and getting that portion of video for display at the client, as described in column 4, lines 4-9. Finally, the step of providing control of a playback position of said data flow based on the indexed points in the look-x data stream is met by column 4, lines 52-58.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2, 4, 6, 7-9, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeo (US Pat. No. 6,711,741), cited by examiner, in view of Ceccarelli (US Pat. No. 6,222,532), cited by examiner.

With regards to claim 2, Yeo teaches all of that which is discussed above with regards to claim 1. Yeo does not expressly disclose the step of displaying a timeline corresponding to the indexed look-x points, the timeline having at least one of the indexed look-x points displayed so as to reference a position on the timeline. Ceccarelli discloses a system with a timeline, which makes reference to a group of keyframes (indexed look-x points). Figure 4 is shown as a display to the user, with a timeline of the whole video at top, and a dark bar section, which indicates the section of keyframes displayed (144-148). Figure 4 and column 3, line 65 – column 4, line 47 give a detailed description of the “timeline” aspect of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the timeline as taught by Ceccarelli into the system as taught by Yeo in order to allow the user to get an overall feel for the progression of the video and frame location of the video presentation. Yeo does not provide specifics for the media player 612; however, a timeline would be an obvious addition to a typical media player.

With regards to claim 4, Yeo teaches all of that which is discussed above with regards to claim 1. Yeo does not expressly disclose the steps of displaying a timeline having representations of the indexed points. Yeo does however disclose the steps of selecting at least one of the indexed points, and displaying the data flow at a point beginning with the selected indexed point. Both of these steps are met by column 4,

lines 52-58, wherein Yeo teaches the ability for a user to control the playback and select the source frames to view based on the selection of temporal snapshots. As stated before, Yeo does not expressly disclose the step of displaying a timeline with indexed points. Ceccarelli does disclose a system with a timeline, which makes reference to a group of keyframes (indexed look-x points). Figure 4 is shown as a display to the user, with a timeline of the whole video at top, and a dark bar section, which indicates the section of keyframes displayed (144-148). Figure 4 and column 3, line 65 – column 4, line 47 give a detailed description of the “timeline” aspect of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the timeline as taught by Ceccarelli into the system as taught by Yeo in order to allow the user to get an overall feel for the progression of the video and frame location of the video presentation. Yeo does not provide specifics for the media player 612; however, a timeline would be an obvious addition to a typical media player.

With regards to claim 6, Yeo teaches all of that which is discussed above with regards to claim 1. Yeo does not expressly disclose that the second connection is a low resolution connection relative to the main connection. Ceccarelli discloses a system in which the provider (or server) can label keyframes before transmission to the client, in order to allow the client easy access to the chosen keyframes (column 1, lines 18-27). While Ceccarelli does not specifically state the use of two connections to the server (one for main video and one for the keyframes), he does, however, make a realization that “video distortions in relatively smallish keyframes have been experienced as tolerable, [and that] if a particular keyframe is enlarged, extra measures should be taken

for picture improvement" (column 2, lines 4-7). This indicates an inherent understanding that the keyframes are often times transmitted as lower resolution images and will need some processing in order to display them at higher resolution requirements. Therefore, it can be understood that the lower resolution keyframes could be used and downloaded over a second lower resolution connection (the connection taught by Yeo). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the low resolution connection, as described by Ceccarelli, into the system of Yeo, in order to allow for more bandwidth conservation and the ability for the user to download more information regarding the keyframes and look-x points and not take up massive amounts of bandwidth in the process.

With regards to claim 7, Yeo teaches all of that which is discussed above with regards to claim 1. Yeo does not expressly disclose any of the steps of selecting, displaying, or updating the indexed look-x points. Yeo simply discussed the TSG 300 (column 3, lines 18-50), which serves to select and send the temporal snapshots to the client. Ceccarelli goes into detail about how the keyframes are selected, displayed, and updated. The claimed step of selecting a predetermined number of indexed look-x points is met by Figure 5, which shows a display of nine keyframes for selection by a user. Nine keyframes is more or less just a suggestion and could presumably be modified to select any number of keyframes as predetermined by the system. The claimed step of displaying the predetermined number of indexed points to provide reference for a playback control mechanism is met by Figure 5 again, which shows the typical display to the user with nine keyframes being selectable and referencing different

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portions within the video to allow for playback control. The claimed step of updating the selected predetermined number of index look-x points based on an update criteria is met by column 4, line 67 – column 5, line 3, wherein Ceccarelli teaches that the display is updated as the video progresses. The update criteria are based upon a distance from the current position. At the time of the invention, it would have been obvious to one of ordinary skill in the art to include the selecting, displaying, and updating steps as taught by Ceccarelli into the system as taught by Yeo, in order to allow the user to see pertinent keyframes and allow them to view keyframes in the near future and recent past.

With regards to claim 8, Yeo and Ceccarelli teach all of that which is discussed above with regards to claims 1 and 7. Yeo does not expressly disclose any step of selecting a predetermined number of look-x points such that each of the look-x points is within a predetermined distance of a first play position of the data flow. Ceccarelli inherently teaches that the number of keyframes on the display fall within a predetermined distance of the play position of the video. It is disclosed on column 4, lines 53-58, that the keyframes are located within seconds of each other, with the center keyframe being the currently displayed video segment. Therefore, Ceccarelli inherently shows that the keyframes that are currently displayed are within a predetermined time, and therefore distance of the play position. At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the inherent teachings of Ceccarelli, as discussed here, with the system as taught by Yeo, in order to allow the

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user to see pertinent keyframes and allow them to view keyframes in the near future and recent past.

With regards to claim 9, Yeo and Ceccarelli teach all of that which is discussed above with regards to claims 1 and 7. Yeo does not expressly disclose that the aforementioned update criteria comprise a change of the playback position a predetermined amount from the first play position during the selection step. Ceccarelli discloses a way of updating the keyframes (column 4, line 67 – column 5, line 3) and the idea of having the currently viewed video segment and its related keyframe in the center and past and future keyframes to the left and right, respectively. In other words, Ceccarelli discloses a dynamic display, which updates according to the currently viewed video segment. At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the updating criteria of Ceccarelli with the system of Yeo, in order to allow for a dynamically updated display of pertinent keyframes in the near future and recent past.

With regards to claim 12, Yeo teaches all of that which is discussed above with regards to claim 10. Yeo does not teach the display displaying a timeline referenced to the data flow and at least one of the indexed look-x points, the indexed look-x points each displayed so as to reference a position on the timeline. Ceccarelli discloses a system with a timeline, which makes reference to a group of keyframes (indexed look-x points). Figure 4 is shown as a display to the user, with a timeline of the whole video at top, and a dark bar section, which indicates the section of keyframes displayed (144-148). Figure 4 and column 3, line 65 – column 4, line 47 give a detailed description of

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the "timeline" aspect of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the timeline as taught by Ceccarelli into the system as taught by Yeo in order to allow the user to get an overall feel for the progression of the video and frame location of the video presentation. Yeo does not provide specifics for the media player 612; however, a timeline would be an obvious addition to a typical media player.

With regards to claim 14, Yeo teaches all of that which is discussed above with regards to claim 10. Yeo does not expressly disclose that the look-x data stream connection is a low resolution data stream relative to the main data stream connection. Ceccarelli discloses a system in which the provider (or server) can label keyframes before transmission to the client, in order to allow the client easy access to the chosen keyframes (column 1, lines 18-27). While Ceccarelli does not specifically state the use of two connections to the server (one for main video and one for the keyframes), he does, however, make a realization that "video distortions in relatively smallish keyframes have been experienced as tolerable, [and that] if a particular keyframe is enlarged, extra measures should be taken for picture improvement" (column 2, lines 4-7). This indicates an inherent understanding that the keyframes are often times transmitted as lower resolution images and will need some processing in order to display them at higher resolution requirements. Therefore, it can be understood that the lower resolution keyframes could be used and downloaded over a second lower resolution connection (the connection taught by Yeo). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the low resolution

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connection, as described by Ceccarelli, into the system of Yeo, in order to allow for more bandwidth conservation and the ability for the user to download more information regarding the keyframes and look-x points and not take up massive amounts of bandwidth in the process.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R. Shannon whose telephone number is (571) 272-7356. The examiner can normally be reached Monday through Friday 8:00 AM – 5:00PM, with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at (571) 272-7353.

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Knox Building
501 Dulany Street
Alexandria, VA 22314

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is **(571) 272-2600**.

Michael R Shannon
Examiner
Art Unit 2614

Michael R Shannon
April 11, 2005



JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600